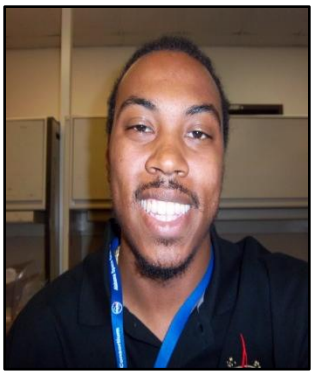

Name: Julion Bell

Education Institution: Alabama A&M University
Major(s)/Degree/Grad Year: Mechanical Engineering/BS 2012
NASA MSFC Mentor: Tina Malone
Org Code/Division or Branch: EM10/Mechanical Test Facility
NASA Academy

Research and Experience

- **Model Airplane Project,** Alabama A&M University (Spring 2009)
  - Group of 4 students assigned to build an airplane model that could fly independently, designed using computer software simulation
  - Designed model using Autodesk Inventor
  - Distance of flight exceeded models in all classes, reaching 150ft in distance. Received A on project and model was placed on display in the Engineering building. Recognized for my leadership role on the project by professor and peers
- **Concrete Masonry,** *General Laborer,* Atlanta, Georgia (4/1/2008-810/2008)
  - Mixed mud for brick layers and insured working area was kept clean and free of debris while following all OSHA safety requirements.60+ hours per week.
  - Summer employment provided partial tuition funding for fall 2008 semester

Membership and Activities

- **Active member of NSBE**
- **200+ hours of Community Service**
- **Active outreach to local community**

Honors and Awards

- **Honors Award 5 semesters in a row (3.0+ GPA)**

Title of Poster: Stitch plug welding for self-reacting friction stir welds.

Abstract: The purpose of this study is to determine the effects of an offset oriented stitch plug after self-reacting friction stir welding two materials and applying a plug. The stitch plugs purpose is to repair a defective original plug that has been repaired at the location of the defect. By positioning a stitch plug in different offsets which are known as, 25/75, 50/50, and 75/25 along the same axis on the specimen, tensile tests are performed. The tests are conducted in room temperature, -320 degrees, and -423 degrees. Each offset is compared with each other along with different qualities unique to each offset. A control is also used for comparison to ensure strength is remaining in the plugs.